ABSTRACT OF THE DISCLOSURE

An actuator is used for controlling an intake valve lift of an automotive engine. A control shaft is joined with a transmission device on its one end side, and is joined with a valve lift controller on the other end side. The control shaft is arranged perpendicularly to a spindle of a motor. Besides, the transmission device includes a drive cam internally. Thus, the actuator is reduced in size in a longitudinal direction of the control shaft regardless the length of the motor. When the motor rotates, the control shaft reciprocates in accordance with a cam profile of the drive cam. The intake valve lift can be precisely controlled by defining the cam profile, especially in a rotation range of the drive cam corresponding to the idling operation of the engine.